

Fisheries and aquaculture Data collection and management
– Strategy and Methods –

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Abstract:

FAO Fisheries Statistics and Information Branch is presenting its core activities in terms of support to Member Countries to reinforce their capacity to produce fisheries statistics for the benefit of FOA but also IOTC.

First, the role of FAO related to SDG indicators is recalled, with the source of data coming from national and regional level.

Secondly, the role of FAO as standard owners and providers is recalled. Some of these standards are endorsed by IOTC and are supporting harmonization and standardization of statistics.

Finally, the mandate of FAO to provide technical support to Member Countries is presented. The different tools to reinforce countries capacities to produce fisheries statistics are listed, from technical papers, international course on fisheries statistics to IT solutions in support to streamlined fisheries statistics supply chain.

Convergence of activities and support between FAO and IOTC is highlighted in the conclusion.

Paper:

1. Leveraging on the UN Agenda 2030 – SDG framework: the global picture of fisheries statistics



FAO is custodian agency of 21 SDG Indicators of which FI is custodian of 4 Indicators under SDG14 “Life below Water”.

SDG 14, conserve and sustainably use the oceans, seas and marine resources for sustainable development, is a major priority of the 2030 Agenda. It’s the only SDG directly related with the ocean and **It encompasses the three dimensions of sustainable development**: social, economic and environmental.

Each SDG indicator has identified a custodian agency to:

- Lead **methodological development** and documentation of the indicator
- Support (statistical) **capacity of countries** to generate and disseminate national (indicators’) data
- Collect (Indicator’s) data from national sources. **Ensure** their **comparability** and **consistency**, and **disseminate** them at global level
- Contribute to monitor **progress at the global, regional and** national levels (storyline and data for the annual SDG reports, Agencies’ flagship publications)

To achieve the above SDG, data is to be collected / collated from different sources:

- **fishery dependent data**: catch statistics, fishing effort data, biological data, and surrogate biomass measures
- Ad-hoc surveys (biennial survey on the Code of Conduct on Responsible Fisheries (CCRF))
- National accounts

2. Supporting Member Countries and regional fisheries bodies

The vision of the FAO Fisheries Department: it “**believes that working with countries is the only way to improve fishery statistics, primarily in order to meet national needs with regard to food security and fisheries management, but also to meet the needs of regional fishery bodies and FAO.**” (FAO, 2017. *The State of World Fisheries and Aquaculture (SOFIA).*)

To support this vision, the Department has developed 3 strategical axes:

1. Maintaining and developing fishery statistical standards



The coordinating Working Party on Fishery Statistics (CWP) provides guidance for statistical standards. It is a standard setting body on fishery and aquaculture statistics - It agrees on standard concepts, definitions, classifications and methodologies for the collection and collation of fishery statistics

CWP has on its agenda the definition of standard for reference harmonization with the aims:

- to define best practices for streamlining data flows reducing the burden on the statistical offices of national fisheries.
- to address national needs to integrate, aggregate, streamline, improve data reporting and exchange between national, regional and global organizations (context of Multiple reporting)
- to issue logbook guidelines

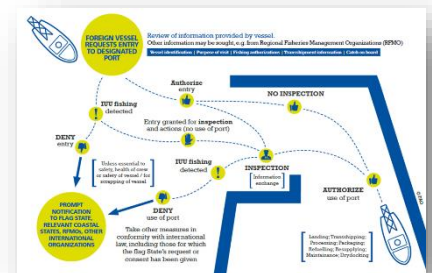
The FI Department also works on regional standards, like the creation of the Data Collection Reference Framework (Case of the Western Central Atlantic Fisheries Commission). A DCRF aims to lay the foundation of fisheries data and statistics collection and collation to feed the needs of developing, monitoring, assessing and reviewing regional fisheries policies.

2. Capacity building and Technical Assistance

The FI Department has different capacity building and technical assistance programmes:

- Fight against IUU: PSMA and Global record of vessel

IOTC has similar technical assistance programmes for PSMA.



- Statistical data collection and reporting: FAO provides methodologies and tools, such as the OpenArtFish since 2000, based on technical handbook 425 for sample-based fishery surveys.



FAO has a long experience of supporting data collection and reporting for small-scale fisheries.

3. Providing information systems and tools

The Fisheries Department in close collaboration has developed modern tools in support to data collection, storage, processing and reporting / dissemination:

- **Calipseo platform:** a framework to quickly deploy a Fisheries Statistics and Management Information System (FISMIS) to replace or complement existing national fishery monitoring system. It supports the complete fisheries statistics supply chain, from data collection, storage, processing, reporting and exchange, including automated reported according to the regional organizations data requirements (like for IOTC). It implements the CWP standards for regional and international reporting.
The system is being finalized for Trinidad and Tobago with a focus on small scale fisheries.
- **SmartForm platform:** a tool to easily create any type of mobile data collection form that can be connected to Calipseo (Example of application: landing site data collection through mobile application, observer data collection)
- **Cloud hosting solution for national FISMIS** and for regional database (WECAFC)
- Development of partnership for innovation: creation of the Global Atlas of AIS based fishing activity
- Information sharing partnership to facilitate the monitoring of stocks status and fisheries (The FIRMS initiative, Fishery and Resource Monitoring System)

Upon request from Member Countries, the Statistics and Information Branch of the FI department explores options to support the reinforcement of capacity of countries to produce timely and reliable data and statistics in support to national policy making and national/regional fisheries management: through national technical cooperation programme project, through trust funds projects, through broader regional projects.

FAO has more than 30 years of experience in supporting Member Countries small scale fisheries monitoring, through the ArtFish system, upgraded to OpenArtFish and now with the new Calipseo platform. This is particularly important in the context of tuna as small-scale fisheries reporting is one of the identified challenges by the t-RFMOs, including IOTC (Regional data collection workshop, March 2018, Rome).

Multiple reporting to regional and international organizations from one unique national source of information and data is a recurrent concern from Member Countries. With modern tools, and collaboration with regional fisheries management organizations such as IOTC, FAO is focusing on developing standards and tools to reduce the burden of reporting and improve timeliness and reliability of fisheries statistics.

- **Conclusion**

FAO FI Department capacity building programmes are addressing the growing demand for timeliness and accurate statistics. This is particularly true for high values species like tuna. FAO is bringing its knowledge and experience of small-scale fisheries to support Member Countries in these tasks of collecting, storing, processing data, and reporting/exchanging fisheries data and statistics to feed national fisheries policy making, to support national and regional fisheries management, and eventually to provide statistics in support of SDG achievements.

There are synergies to be explored between FAO initiatives to support Member Countries and IOTC support to better compliance of Contracting Parties to reporting requirements.